

Amazon and Virginia: A novel partnership proposal

Virginia's proposal to Amazon:

Amazon seeks room to grow its businesses, talent to drive innovation, and regional infrastructure to properly support the magnitude of its HQ operations. Amazon's HQ2 priorities largely mirror Virginia's economic priorities – to strengthen our position as a leader in innovation, grow our already robust, high-tech talent pool (and pipeline), and get ahead of the curve on transportation infrastructure. Accordingly, Virginia is uniquely positioned to be Amazon's growth partner for HQ2, with a willingness to invest alongside Amazon.

For HQ2, Virginia envisions a new model of economic development for the 21st century:

We propose not only a competitive incentive offering but also a comprehensive, strategic investment program designed to position HQ2 and Virginia's entire tech ecosystem for long-term success. State incentive grants will lower Amazon's start-up costs, while strategic state investments in talent and infrastructure will ensure that Amazon's chosen Virginia location provides a fertile environment to sustainably support HQ2's rapid growth as well as the growth of other tech employers.

Virginia is offering a bespoke partnership proposal with the following new state commitments over 20 years for a 25,000-job commitment:

- Provide post-performance state incentives to offset Amazon's workforce
 development costs (up to \$550 million for 25,000 jobs): Performance-based
 grants for job creation will offset a substantial portion of expenditures for talent
 acquisition and development.
- Produce (even) more talent (up to \$1.1 billion, with additional funding to be raised or contributed by higher education partners): The critical path for growing Amazon's core (Marketplace, Prime, and AWS) and emerging pillars is attracting, developing, and retaining world-class talent. Virginia has crafted a comprehensive strategy to dramatically expand Virginia's high-tech talent pool through a performance-based tech-talent pipeline initiative, which would benefit Amazon as well thousands of other tech employers across the Commonwealth.
- Invest in infrastructure to get ahead of Amazon's growth (\$195 million): Amazon's experience in Seattle underscores the partner region's need to invest in multimodal transportation infrastructure. Virginia will invest proactively to ensure HQ2 does not experience constraints to growth.

Focus area	Component	Description	Size (\$MM)
Company incentive	Provide post-performance incentive grants	Provide post-performance job-creation grants to offset Amazon's talent acquisition and development costs associated with standing up HQ2	550*
Tech-talent pipeline initiative	Expand tech-talent pipeline across Virginia	Expand Virginia's statewide tech-talent pipeline, adding 12,500-17,500 bachelor's degrees in computer science and closely related fields in excess of current levels over the next 20 years, as well as invest \$25 million in expanded internship opportunities to connect tech students to tech jobs	Up to 710**
	Launch tech campus(es) in Northern Virginia	Build a tech campus (or two distinct campuses) alongside a leading anchor university that will attract and retain top talent globally, creating an additional 12,500-17,500 master's degrees in computer science and closely related fields in excess of current levels over the next 20 years	Up to 375**
	Broaden K-12 tech-talent pipeline	Boost the tech-talent pipeline of the future by further developing and deploying K-12 tech-talent education programming	25
Regional infrastructure expansion	Enhance multimodal transportation infrastructure	Provide state support for priority transportation infrastructure projects that will improve mobility in the region	195***
Total of company incentive	S		550*
Total of state competitiven	ess investments (tech-talent pipeline in	itiative and infrastructure expansion)	Up to 1,305****

^{*} Maximum value of \$550 million assumes company creates 25,000 jobs with average annual wages of \$150,000, plus benefits, escalated at 1.5% annually. Up to \$200 million in additional company incentives (for a cumulative total of \$750 million) is available if the company creates a total of 37,850 qualifying jobs within 20 years

^{**} Value represents the maximum new state investment in capital and operational support that may be required to achieve the referenced degree production outcomes. Participating institutions will enter into MOUs that detail their plans for growth, state funding commitments, annual reporting requirements, and future funding parameters associated with performance. The total new state investment to grow bachelor's-level tech-talent education will be determined in part by how much of the growth in computer science and related fields is associated with an overall increase in college graduates at each institution and how much relates to a shift in the degree-field mix that may occur at some institutions

^{***} Maximum value of \$195 million assumes company creates 25,000 jobs with average annual wages of \$150,000, plus benefits, escalated at 1.5% annually. Up to \$100 million in additional state infrastructure commitments (for a cumulative total of \$295 million) is available if the company creates a total of 37,850 qualifying jobs within 20 years

^{****} Maximum value assumes company creates 25,000 qualifying jobs and assumes maximum potential state investment for the tech-talent pipeline initiative

Virginia can guarantee long-term stability to a greater degree than any other state, through its unique structures and proven track record

- Stable long-term partner through VEDP: Created as a state governmental authority more than two decades ago, VEDP was designed in large part to ensure stable state economic development leadership in contrast to most state economic development organizations (EDOs). A nonpartisan, professional state EDO, VEDP will serve as a stable, committed, long-term partner to Amazon, offering concierge-style services to support HQ2's success.
- Exceptional governance with stable government partners and elected
 officials: Virginia is ranked 2nd nationally for the quality of its state
 administrative functions, and is committed to maintaining its top credit rating.
 Virginia's friendly tax and regulatory policies provide Amazon a predictability in
 operations with no need to consider repatriation of profits from Canada.

• Proven track record for private-sector partnerships: For decades, Virginia has consistently ranked as a top state in which to do business, with CNBC, Forbes, Site Selection, and others regularly praising the state's business environment. Virginia and Amazon have also partnered successfully together in the past on the expansion of the AWS east coast campus.

A DEEPER VIEW

Provide performancebased incentive grants

Outcome

Through up to \$550 million in post-performance incentive payments, the state will reimburse Amazon for talent acquisition and development costs.

How it will work

Post-performance incentives of \$22,000 per new job will be provided, with payments to occur four years after each job is created. Qualifying jobs must pay \$150,000, plus benefits, escalated at 1.5% annually.

If the company creates more than 25,000 qualifying new jobs, a post-performance incentive of \$15,564 per new job in excess of 25,000 jobs, up to 37,850 jobs, will be available, for a potential total additional incentive of \$200 million.

Our recently developed economic growth strategy for the Commonwealth of Virginia envisions the technology sector as the principal driver of Virginia's high-wage employment growth for many years to come. With HQ2, Amazon and Virginia share a historic opportunity to build on our complementary strengths while further cementing our respective leadership positions—Amazon as one of the most important private-sector innovators in the world, and Virginia as America's premier state for talent, innovation, and business investment. Through our collaborative efforts, we also can craft a unique partnership that will establish a new, higher standard for economic development in America.

Stephen Moret, President & CEO, VEDP

Expand technology talent pipeline

Outcome

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Leveraging Virginia's world-class public higher education system, the Commonwealth will increase production of bachelor's degree graduates in computer science and closely related fields by at least 12,500-17,500 degrees in excess of current levels over 20 years (doubling current degree production levels in less than a decade).

How it will work

Provosts, CFOs, Vice Presidents for Research, and Deans at Virginia's public universities have been engaged with VEDP to provide input on what it would take to dramatically expand production of degree programs typically associated with the high-tech sector. These leaders have enthusiastically committed to expanding production with state support.

Subject to performance-based agreements to be negotiated with each public community college, four-year college, and university across Virginia that wants to participate, state funding will be provided to recruit faculty, address capital needs, and provide ongoing enrollment support necessary to more than double existing levels of degree production in computer science and closely related fields. The overall program will include five components: (1) a K-12 tech-talent pipeline initiative; (2) a community college program; (3) bachelor's-level education; (4) master's-level education (described on following page); and (5) a tech internship program for higher education students.

Performance-based funding will be focused on the expansion and modernization of degree programs essential to the high-tech sector (e.g., computer science, computational sciences, software engineering, and possibly data science), to be developed in close collaboration with industry leaders, including but not limited to Amazon.

Virginia's higher education institutions are prepared to:

- Recruit new faculty in focus areas relevant to Amazon and other leading tech
 firms, such as computational sciences, artificial intelligence, data sciences,
 machine learning, natural language processing, and cloud computing
- Design curriculum to ensure graduates are equipped with essential skills and technical areas of expertise that are relevant to industry
- Develop cooperative programs to create a natural feeder program for Amazon and other high-tech firms

Motivation for this initiative

Since attracting, developing, and retaining high-quality talent is Amazon's single biggest limiting factor for growth – as well as that of hundreds of other tech firms in Virginia – we are committed to investing in expanding our already robust, existing talent base to meet the growing needs of Virginia's tech ecosystem. While the D.C. metro area is already the largest producer of computer science graduates in North America, Virginia plans to keep increasing the available pool of talent – in Northern Virginia and across the Commonwealth.

A DEEPER VIEW

Launch a tech campus

Outcome

Virginia will build at least one world-class tech campus alongside one or more anchor higher education institution(s), which will attract and retain top talent globally, adding at least 12,500-17,500 master's degrees in excess of current levels over 20 years.

How it will work

Virginia will commit up to \$375 million, subject to a one-to-one match with philanthropic funds raised by the university(ies), to the anchor academic institution(s), with funding available for both capital investment and operational support over 20 years.

Motivation for this initiative

While Virginia's institutions are already producing tech talent in frontier areas (e.g., Virginia Tech's Data & Decision Sciences, Integrated Security, and Intelligent Infrastructure for Human-Centered Communities; GMU's Cyber & Analytics program; or VCU's artificial intelligence and voice programs), higher education

trends indicate dedicated facilities (e.g., technology buildings and campuses) are a compelling means of attracting and developing top talent. Virginia is committed to maintaining its competitive edge, through building a tech campus, in order to be a long-term talent partner for Amazon.

Upon completion, the tech campus(es) will be a center of gravity for innovation and attract talent from across the world, giving Amazon proximate access to graduates. Through input in curriculum development, Amazon and other leading tech firms will be able to have yet another natural feeder program for talent and be able to cultivate world-class, innovation-driven talent. As our tech ecosystem's needs change over time, the courses and curricula can be adapted too.

CASE STUDY: CORNELL/TECHNION

New York City offered \$100 million and land on Roosevelt Island in a competition to attract a premier applied sciences campus. In December 2011, Cornell and Technion (Israel Institute for Technology) beat out six competing bids to build a \$2 billion campus on Roosevelt Island on the East River-side of Manhattan. The campus will feature both a graduate school and a startup incubator; however, this represents just phase 1 of a 3-phase development that is expected to be completely finished by 2043.

A DEEPER VIEW

Broaden K-12 tech-talent pipeline

Outcome

Boost the tech-talent pipeline of the future by further developing and deploying K-12 tech-talent education programming.

How it will work

Building the tech-talent pipeline starts with a public K-12 system that includes integrated STEM and computer science curriculum for every student. Virginia led the nation by adopting computer science standards across the K-12 continuum, and is continuing to equip teachers to implement them effectively.

However, in order to meet the growing needs of Amazon and other hightech employers, additional investments are needed to bring high-quality STEM and computer science teaching and learning to scale. Therefore, over the next 20 years the state will invest \$25 million statewide in new funding in the K-12 STEM and computer science experience for students and teachers. This investment will enable the Commonwealth to provide ongoing professional development to current and future teachers; create, curate and disseminate high quality curriculum and resources; support summer and after-school programming for students; and facilitate meaningful career exposure and work-based learning opportunities in high-demand fields.

Motivation for this initiative

Virginia understands that it is not only the talent pipeline that Amazon and other tech companies have access to today that matters, but also what this talent pool will look like in the decades to come. Further developing robust K-12 tech-talent programs will ensure that students cultivate the robust skill sets and interest in tech fields from a young age, expanding the future talent pipeline, and giving Amazon and other small and large tech firms access to incomparable talent for decades to come.

And it is not just future tech employers who will benefit from this investment. The development of K-12 tech-talent programs will build on the strengths of Virginia's leading public school system, making Virginia an even more distinctive option for future employees who consider raising a family, or who already have young children.

CASE STUDY:

Virginia Tech offers Kid's Tech University (KTU), a year-long STEM program for 9-12 year-olds throughout Virginia. Since its inception in 2002, thousands of students have ignited their passion for the sciences through the monthly interactive sessions and lectures, and the ongoing virtual lab. KTU's virtual classroom labs are a useful model of easy, affordable access to quality STEM education at scale. We could offer a similar model of MOOCs across Virginia's public schools that would increase STEM scores around the state without high operational or R&D costs.

Enhance multimodal transportation infrastructure

Virginia is home to Thomas Jefferson High School for Science and Technology (Ranked #2 STEM-focused high school in America). Thomas Jefferson High School uses a STEM-focused curriculum that starts with the Integrated Biology, English and Technology program, requires AP Calculus and a year of programming (Python, J++), and culminates with a technical lab project for seniors. The rigorous, structured curriculum provides a robust tech skill base in students, and serves as an excellent model for future STEM schools. Thomas Jefferson boasts more than 10 specialized research labs, ranging from astrophysics to oceanography, along with funding for student-driven ideas. One such lab developed TJ3SAT, the first and only satellite to be launched by high school students, in 2013. With funding support from Virginia, and technical expertise from Amazon, future STEM schools can act as incubators.

Outcome

Undertake transportation system capacity enhancements to get ahead of Amazon's anticipated commuter demand.

How it will work

Virginia will invest up to \$295 million (\$195 million for the creation of 25,000 qualifying jobs, and an additional \$100 million for a total of 37,850 qualifying jobs) to address transportation connectivity enhancements necessary to meet anticipated demand from Amazon's employees commuting to and from work. Anticipated priority projects include additional entrances to the Metro stations at Crystal City and Potomac Yard; improvements to Route 1; a connector bridge from Crystal City to Washington National Airport; and a transitway expansion supporting Pentagon City, Crystal City, and Potomac Yard.

Motivation for this initiative

While National Landing already offers a variety of attractive options for mobility and transportation capacity, Amazon's headquarters will bring anticipated increases in demand. Virginia is committed to making infrastructure improvements to the regional transportation system that will ensure Amazon's employees have a hasslefree, enjoyable commute to and from work, via public transport, and that residents in the area benefit from an enhanced transportation system.





National Landing: Summary of local proposals offered

Focus area	Component	Description	Timing	Size (\$MM)
Direct benefit to Amazon	Transient Occupancy Tax (TOT) Grant	Available in the North and Central Districts (Arlington County), an annual pay-for-performance grant tied to the company meeting annual office occupancy targets. The incentive comes from a portion of the new incremental revenue from the County's existing TOT tax, which is a tax paid by tourists and business travelers on hotel rooms or other paid lodging	Investment over 15 years, subject to performance	23*
Benefit to employees	Relocation Assistance	Arlington County will provide support for new and relocating employees, such as regional business integration, training, community familiarization efforts, and tailored commuting and transit network information	On-going/As needed	In-kind
Investment in the site and market	Connectivity and Transit	A collection of projects (e.g. new Metro station, existing Metro station improvements, street infrastructure improvements) will directly benefit Amazon HQ2 employees with a focus on providing a wide variety of options to traverse between office nodes and area amenities	Investment over 15 years	570
	Affordable Housing On and Around Site	Arlington County and the City of Alexandria will fund affordable housing bolstered by revenue generated from Amazon's presence in their communities. Combined, the communities project annual investment of at least \$15 million for the next decade, resulting in the creation and preservation of 2,000-2,400 units	Investment over 10 years	150
	Strategic Infrastructure Investment	Arlington County proposes using a portion of new incremental revenue generated by Amazon within the existing Tax Increment Financing (TIF) area to make strategic infrastructure investments in and around National Landing	Investment over 10 years	28**
	Innovation Campus	The City of Alexandria will consider financial incentives or participation in the project, including but not limited to, foregoing real estate taxes for parcels/buildings owned by Virginia Tech, facilitating tax-exempt bond financing, one-time grant payments and forgiveness of required developer contributions associated with site(s)	Investment over 20 years***	20***

Estimated value, based on Amazon occupying 6 million square feet over a 15-year performance period; grants paid annually

stst Estimated value. This is not a grant to the company

^{*** 20} year estimate- foregone real estate taxes continue as long at the university retains ownership of parcels/buildings

Additional Programs Available

Investment to be determined by project parameters moving forward:

The City of Alexandria and Arlington County have a wide variety of additional investment and relocation tools to assist new corporations when choosing Northern Virginia. While not comprehensive, some of the tools available are highlighted below.

Technology Zone: In the Central and North Districts (Arlington County), qualified technology companies receive a 50% reduction in business license tax rates for 10 years.

Workforce Development & Training: Various programs and assistance are available to assist with employee recruitment, training, and retention.

Green Building Density Incentive: Available in the Central and North Districts, Arlington's Green Building Density Incentive Program allows developers to earn additional building density in exchange for achieving LEED Silver (or higher) and post-occupancy Energy Star certification.

ConnectArlington: Arlington established a fiber optic network for its own use, which also includes additional capacity designated for long-term expansion. Arlington's ConnectArlington program allows businesses access to this additional capacity for high-speed, secure data transmission.



Upon acceptance, further action is required to create the appropriate legislation and subsequent formal approvals from the Arlington County Board, the Arlington County Industrial Development Authority (IDA), and the Alexandria City Council. Accordingly, this proposed investment should not be considered as a binding obligation of Arlington County or the City of Alexandria. Any final performance agreement will reflect the input of the Arlington County Board, the Arlington County IDA, the Alexandria City Council, as well as Amazon's final project investment, square footage, employment, and wages. A signed performance agreement between Arlington County, the IDA, the Alexandria City Council, and Amazon will be required, outlining the expectations associated with the project. Any public disclosure concerning this project must be coordinated and publicly announced first by the Commonwealth of Virginia, Arlington County, and the City of Alexandria in order to take full advantage of these programs.

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Provisions

In either jurisdiction, it will require the execution of a detailed performance agreement to be crafted with the company. The performance based agreement will provide for a commitment by Amazon to minimum levels of capital investment, lease/purchase of square feet, and creation of new jobs, as well as a timeline for reaching these milestones, and in exchange, a commitment by the City of Alexandria and Arlington County to execute the investments on a timeline coordinated with the achievement of the company's milestones. This will result in a tiered delivery of investments to the company— as Amazon invests, so will the City and County.